

Date: Monday, 1/14/2008 2:32:49 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BRACKET ASSEMBLY
Job Number : 36736	
Estimate Number : 12454	
P.O. Number :	Part Number : D3183042
This Issue : 1/14/2008 S.O. No. :	Drawing Number : D3183 REV C1
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : MACHINED PARTS	Drawing Revision : C1
Previous Run : 27604	Material :
Written By :	Due Date : 2/5/2008 Qty: 4 Um: Each
Checked & Approved By : <u>08.01.15</u>	
Comment : Est/Rev Pick: A 04.02.18 New issue KJ/DS	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description:
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1.0	M174B2000X01500	17-4 SS Bar
-----	-----------------	-------------



Comment: Qty.: 0.4812 f(s)/Unit Total : 1.9249 f(s)  
 Material: 17-4 SS Bar per AMS 5604/5643  
 (M17-4-B1.500x02.000)  
 Identify for D3183-043  
 Batch: M19478

DIP 08/02/17

2.0	BAND SAW	BAND SAW
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Comment: BAND SAW  
 Cut blanks: (1.500" x 2.000") 4.300" long

DIP 08/02/17 (4)

3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1
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Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine D3183-2 as per Folio FA320 and Dwg D3183  
 Identify as D3183-2

2-Deburr

3-Scribe batch number

SF 08/02/29 (4)

4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
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Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SF 08/02/29 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: D Date: 08/03/06  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 1/14/2008 2:32:49 PM  
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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 36736

Part Number: D3183042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

J.L 08/02/29

6.0

D312121

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D3121-21

Bolt

B37478

ml 08/03/04

7.0

D3183045

Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 D3183-045 Bearing Ass

B36638

x8

ml 08/03/04

8.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-041 as per Dwg D3183.

+ scribe

ml 08/03/04

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/03/04 (4)

10.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: 233A

08/03/04 (4)

11.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/03/04

Job Completion



ml 2008/3/05

(4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	36736
<b>Description:</b> Bracket		<b>Part Number:</b>	D3183-2
<b>Inspection Dwg:</b> D3183	<b>Rev:</b> C1	<b>Page 1 of 1</b>	

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

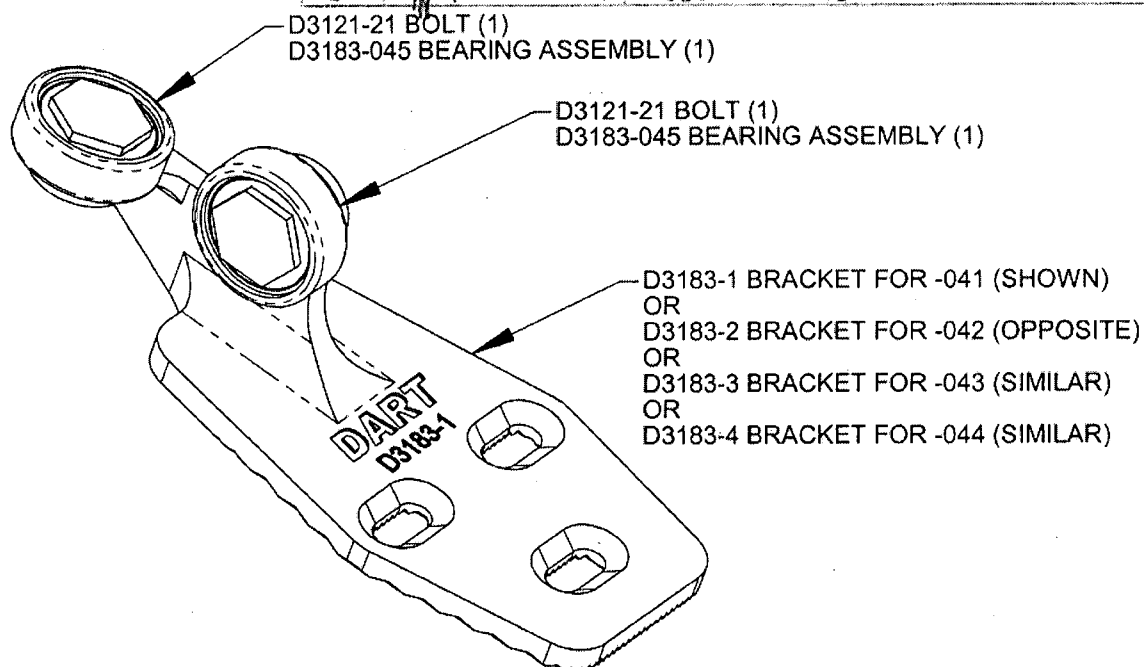
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.162	+/-0.010	.162				
R0.25	+/-0.030	.250				
3.105	+/-0.010	3.108				
2.075	+/-0.010	2.075				
0.786	+/-0.010	.786				
0.162	+/-0.010	.160				
100°	+/-0.05°	100°				
2.799	+/-0.010	2.800				
Ø0.392	+0.002/-0.000	.393				
1.90	+/-0.030	1.890				
0.218	+/-0.010	.215				
0.500	+/-0.010	.501				
3.881	+/-0.010	3.881				
4.17	+/-0.030	4.172				
Ø0.201 x 100 deep	+/-0.010	.200 x .101				
0.182	+/-0.010	.184				
0.070	+/-0.010	.071				
0.100	+/-0.010	.110				
4.8°	+/-0.05°	4.8°				
0.381	+/-0.010	.380				
0.200	+/-0.010	.200				
0.435	+/-0.010	.431				
0.615	+/-0.010	.610				
0.032	+/-0.010	.030				

<b>Measured by:</b> J.F.	<b>Audited by:</b> J.L.	<b>Prototype Approval:</b>	N/A
<b>Date:</b> 08/02/29	<b>Date:</b> 08/02/29	<b>Date:</b>	N/A

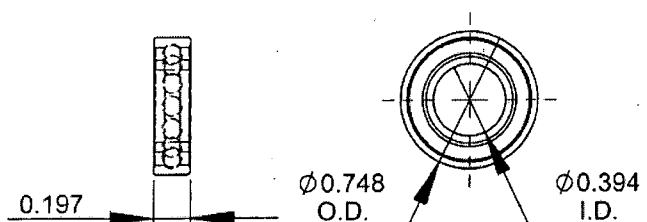
Rev	Date	Change	Revised by	Approved
A	06.09.19	New Issue (P/O D3183-042)	KJ/JLM	

**DART**

DESIGN #	DRAWN BY CP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. D3183	REV. C SHEET 1 OF 4
DATE 04.02.17		TITLE BRACKET ASSEMBLY	SCALE 1:1
A.	03.01.24	NEW ISSUE	
B.	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
C.	04.02.17	ADD -045/-9; 0.182 WAS 0.431	
CI	04.11.09	0.830 WAS 0.850	

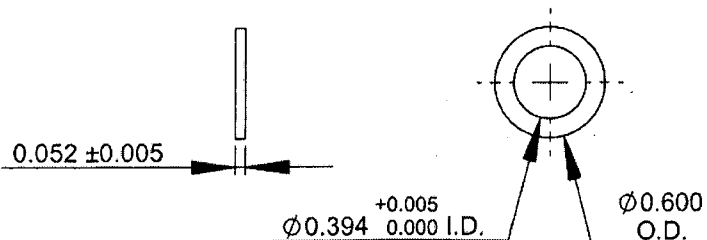
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04 03 01

**D3183-041 BRACKET ASSEMBLY (SHOWN)**  
**D3183-042 BRACKET ASSEMBLY (OPPOSITE)**  
**D3183-043 BRACKET ASSEMBLY (SIMILAR)**  
**D3183-044 BRACKET ASSEMBLY (SIMILAR)**



**D3183-5 BEARING:**  
**SPECIFICATION CONTROL DRAWING**

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
  - 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
  - 3) ALL DIMENSIONS ARE IN INCHES
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WITHOUT NOTICE  
WORK ORDER  
NO. 36736



**D3183-7 WASHER**

- 1) MATERIAL: AISI 303 ROUND BAR (M303R)  
ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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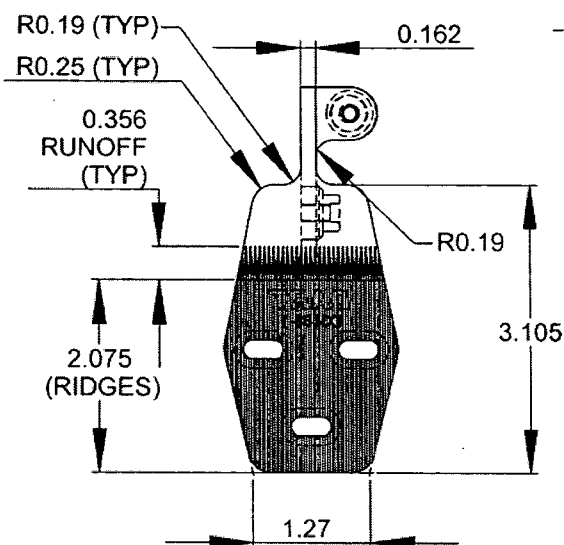
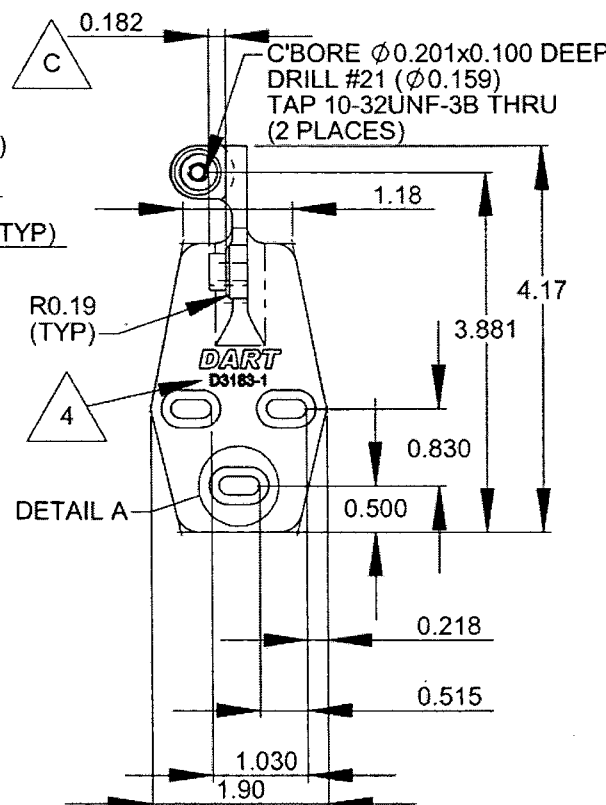
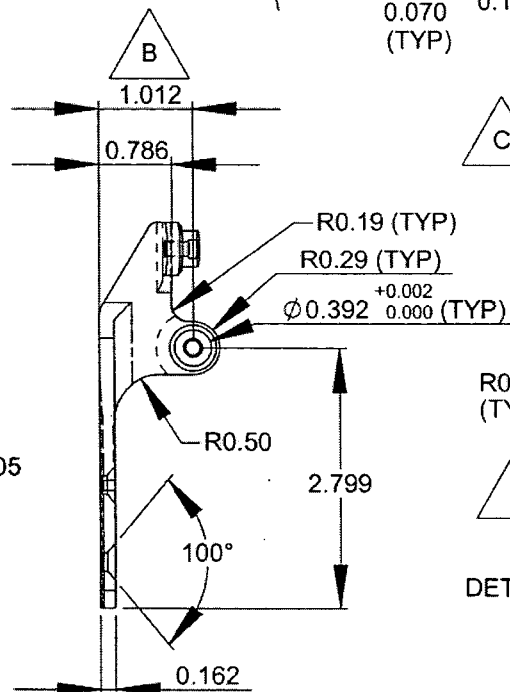
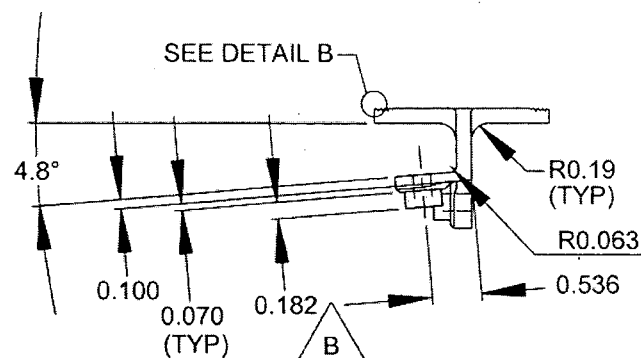
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DATE	DRAWING NO.	REV. C
04.02.17	D3183	SHEET 2 OF 4
TITLE	BRACKET ASSEMBLY	SCALE
		1:2

**RELEASED**  
04.03.01



**D3183-1 BRACKET SHOWN  
D3183-2 BRACKET OPPOSITE**

- 1) D3183-1 CAN BE MADE FROM D3183-3  
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

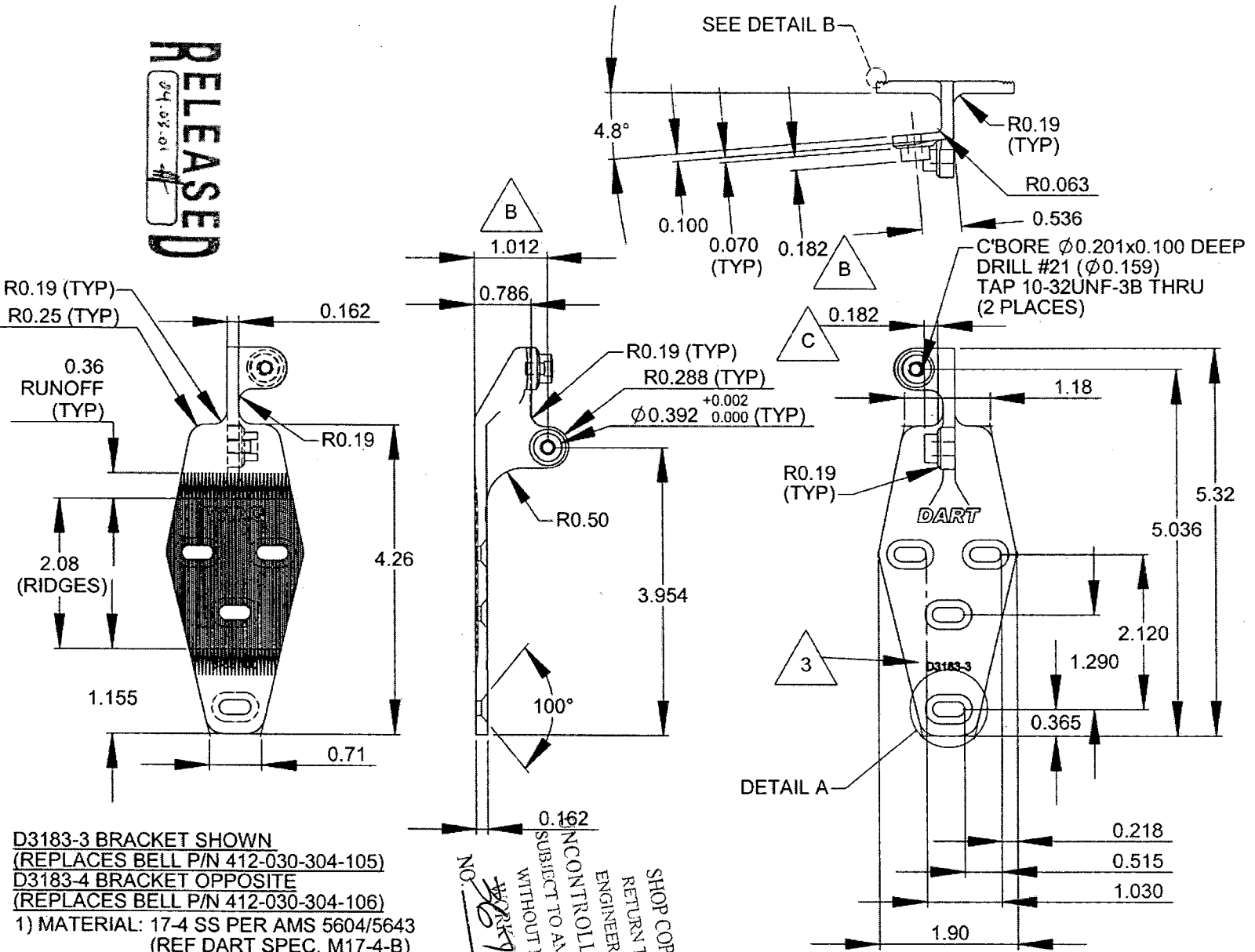
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DATE		D3183	SHEET 3 OF 4
04.02.17		TITLE	SCALE
		BRACKET ASSEMBLY	1:2



D3183-3 BRACKET SHOWN  
(REPLACES BELL P/N 412-030-304-105)  
D3183-4 BRACKET OPPOSITE  
(REPLACES BELL P/N 412-030-304-106)

1) MATERIAL: 17-4 SS PER AMS 5604/5643  
(REF DART SPEC. M17-4-B)  
MIN ULTIMATE STRENGTH = 150 ksi  
MIN YIELD STRENGTH = 100 ksi

2) BREAK ALL SHARP EDGES 0.005 TO 0.015

3) ENGRAVE DART P/N & LOGO AS SHOWN

4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

5) ALL DIMENSIONS ARE IN INCHES

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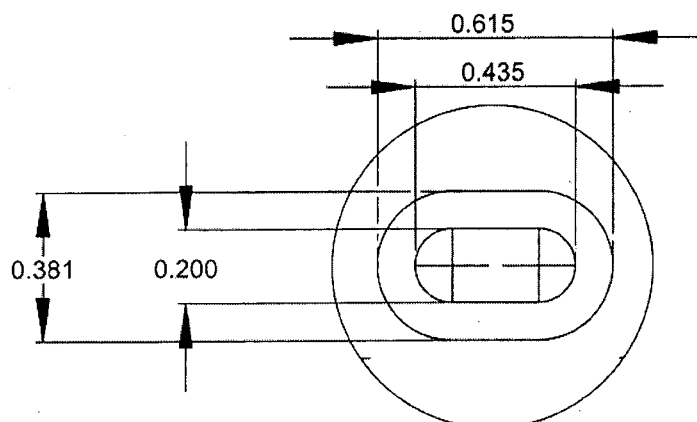
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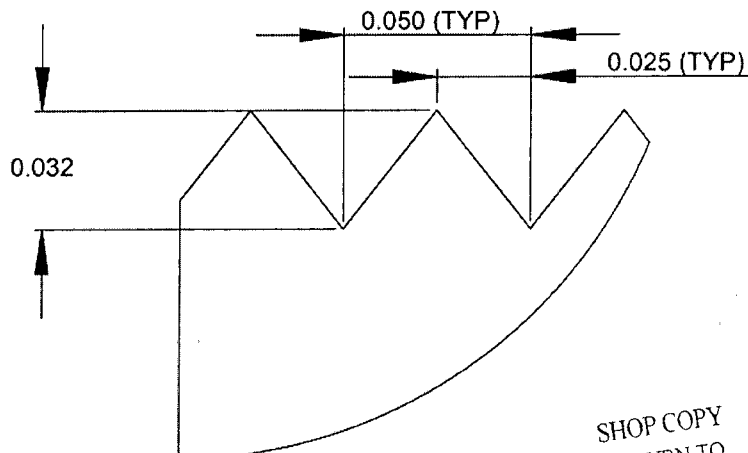


DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
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DATE <b>04.02.17</b>		TITLE <b>BRACKET ASSEMBLY</b>	SCALE 1:1



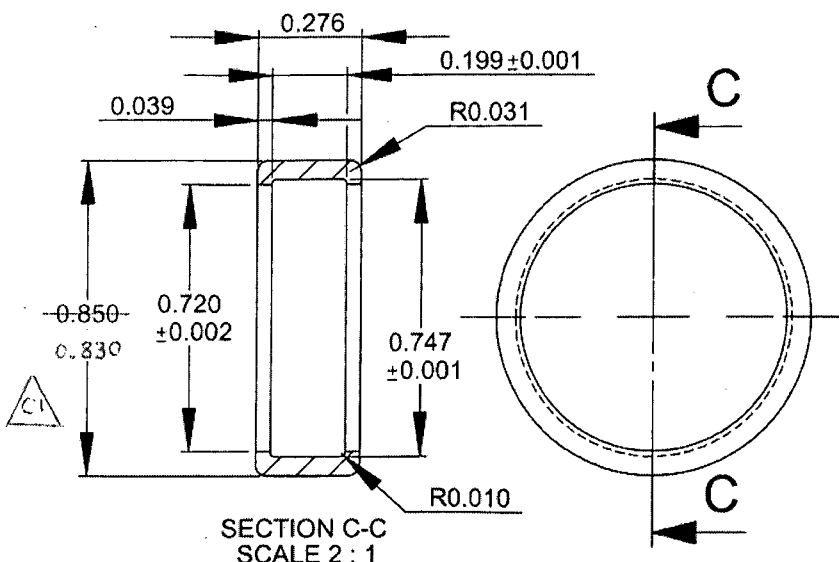
DETAIL A (2 : 1)

**RELEASED**  
04.03.01 *[Signature]*



DETAIL B (20 : 1)

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WORK ORDER  
NO. **36736**



**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00  
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018  
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

**D3183-045 BEARING ASSEMBLY**

- 1) ASSEMBLE D3183-5 BEARING AND  
D3183-9 CAP

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